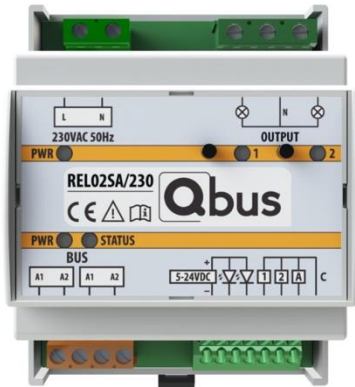


# Relais module REL02SA (Stand-Alone)



REL02SA, 2 output relais module

## 1. Product Description

This module with 2 outputs and 3 inputs is the base of the Qbus Stand-Alone range and functions both autonomously – so WITHOUT Controller, WITHOUT external power supply (works directly on 230VAC), and WITHOUT any configuration – but can also be connected to a Controller to become part of a full-fledged Qbus installation

The REL02SA contains 2 outputs of each max 16A to control lighting, power plugs, ... without controller and without any configuration. The module outputs 230VAC directly. These are 2 independently operating contacts that are set as bistable outputs (on / off => teleruptor function) as standard.

For heavy inductive loads (many fluorescent lights) with a high capacity or bipolar applications, contactors need to be added. The REL02SA module contact will then activate the coil of the contactor.

It is also possible to configure a REL02SA module via a Qbus controller and then take the controller away. This way, the relay contacts can be configured with a delay ON, delay OFF and TIME OFF-function. Keep in mind that besides the TIME-OFF function, no other Timers are possible in Stand-Alone mode. Using the Controller, the inputs can be set as Normal Open, Normal Closed, Pushbutton.

The REL02SA module also has 3 potential-free inputs to connect standard push buttons. Input 1 and 2 control respectively output 1 and 2, input A is a scene-input which executes an ALL OFF-scene when pushing for 0,7 seconds (and then releasing the button), or a PANIC-scene (All Outputs on) when pushing the button for 3 seconds. The inputs are set standard in push button mode. When de REL02SA is connected to a controller, the input mode of the REL02SA can be changed to Normal Open, Normal Closed or toggle.

Wanneer de REL02SA als deel van een Qbus domotica-installatie wordt gebruikt (dus met een controller) kan via de Qbus configuratiesoftware de functie van de in –en uitgangen aangepast worden. Let wel: de ingangen 1 en 2 blijven steeds enkel de uitgangen 1 tot 2 sturen en kunnen dus niet gebruikt worden om andere uitgangen te sturen.

In case the REL02SA is used as part of a Qbus automation installation (with a controller), all outputs and inputs on the REL02SA can be configured using the Qbus configuration software. Keep in mind that inputs 1 and 2 directly control outputs 1 and 2 and cannot be configured to control other outputs.

The module also contains four LED outputs to be used as feedback on swathe push buttons. In order to use the LED feedback, an external 24V power supply needs to be installed.

All programming remains internally stored in a nonvolatile memory. After a voltage cut-off, the outputs return to their latest position.

A bipolar automatic fuse of a maximum of 16A must be placed on the mains power.

## 2. Safety Instructions

Read the complete manual before carrying out the installation and activating the system.



### WARNING

- The device must be mounted, commissioned and serviced by an authorized electrician in accordance with the country-specific regulations.
- This device is exclusively suitable for DIN-rail mounting EN50022. It must be mounted in a fire-enclosure with ventilation holes.
- A safety disconnection of the device must be possible. Before carrying out the installation the REL04SA should be de-energized.
- The device must not be opened. All guarantee provisions turn void when the module is opened.

## 3. Mounting and wiring

The REL02SA can be used in different installation configurations. Following specifications will remain the same across the different configurations:

### FITTING:

Snap device onto DIN rail to DIN EN50022.

### INPUTS:

Both solid and stranded wire between 0,5 – 1, 5 mm<sup>2</sup> can be used (for stranded use a screwdriver to push on the connection when inserting the wire). Remove approx. 7mm of insulation from the wire and push it into the input terminals 1-A. By pushing with a screwdriver on the connector, the wire can be removed from the connector. Input 1/2 controls respectively output 1/2. Input A is set as a scene-input. Pushing the pushbutton connected to Input A for 0,7 seconds will turn all outputs on the REL04SA OFF. Pushing the same button for at least three seconds will turn all outputs ON.

### LED OUTPUTS:

24V LEDs can be connected to the LED-output connector. A 24V external power supply needs to be connected in order to do so.

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## LOAD CIRCUITS:

Connect the loads to the outputs. Conductor cross section: minimum 1,5mm<sup>2</sup>. Remove approx. 7mm of insulation from the wire and screw it into the terminals OUT1 – OUT2.

If sockets are to be connected to the home automation system, this should be done with separate contactors (2P/20A contactor required).

## POWER SUPPLY:

A bipolar automatic fuse of a maximum of 16A must be placed on the mains power 230Vac.

Conductor cross section: minimum 1,5mm<sup>2</sup>.

Remove approx. 7mm of insulation from the wire and screw it into the terminals Ph-N.

## WARNING:

BEFORE WORKING ON THE DEVICE DISCONNECT THE MAINS SUPPLY VOLTAGE.

## LED INDICATION ON THE MODULE:

**Green** light: power supply. (230VAC aanwezig of bus aanwezig).

**Red** light: start-up 3 seconds and during programming.

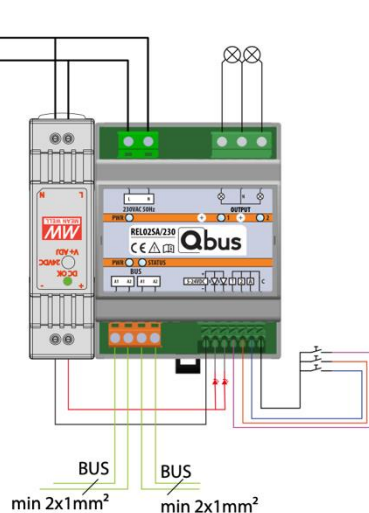
**Orange** light 1-2 : Output 1 -2 active.

## MANUAL CONTROL:

Used to control the output directly from the module, or to put the module in Shutter Mode. Each output can be controlled via the button underneath the output

## CABLING OPTIONS:

### Stand-Alone with LED-feedback



The scene inputs of multiple REL02SA modules can be connected with each other.

## 4. Technical Data

### GENERAL SPECIFICATIONS:

- Power supply: 230Vac +-10%, 50 Hz - maximum protection 16A/2P
- Insulation voltage: 3 kVac tested
- Characteristic consumption: 9VA maximum – all relays on
- Ambient temperature:
  - Working temp. range: 10°C to 50°C
  - Storage temp. range: -10°C to 60°C
- Maximum humidity: 93%, no moisture condensation
- Bus load: 10mA at nominal 13,8V
- Internal fuse: 500mA single-phase
- Max installation altitude: 2.000 meters.

### OUTPUTS:

- OUT1 – OUT2: 230VAC output
- In Stand-Alone mode, the outputs can be set as:
  - ON/OFF
  - Via a CTD (which can be removed after changing the mode and setting the values) the outputs can be set as DELAY ON, DELAY OFF, TIME OFF.
- When coupled with a controller, the REL02SA will receive its input and output modes via the controller. When the controller is taken away, all Timer modes will be turned in to Timer 1 mode.
- Rated current: 16A
- Contact resistance: 100mΩ
- Set/Reset time: 15ms max / 5ms max
- Endurance: 20mil. Operations
- Rated load:
  - Resistive load (cosφ = 1)
    - 16A at 230Vac / 30VDC
  - Inductive load (cosφ = 0,4; L/R = 7 ms)
    - 8A at 230Vac / 30VDC
- Maximum switching power:
  - Resistive load (cosφ = 1)
    - 3680VA at 230Vac
    - 480W at 30Vdc
  - Inductive load (cosφ = 0,4; L/R = 7 ms)
    - 1840VA at 230Vac
    - 240W at 30Vdc

We strongly recommend not to exceed these values, otherwise an external contactor should be used!

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**INPUTS:**

- IN1 – IN3: 3 potential-free single contacts
- Input signal delay:
  - when closing the contact: max 100ms
  - after opening the contact: max 100ms
- Input function: standard as push button. When the REL02SA is coupled with a Controller, the inputs can be set as Normal Open, Normal Close or Push button.

**PHYSICAL SPECIFICATIONS**

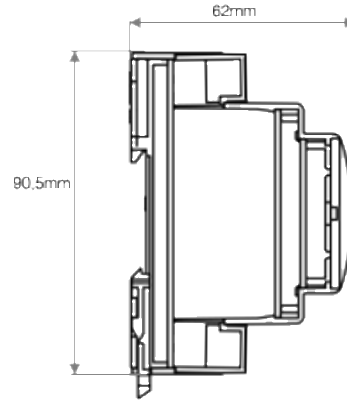
- Housing: Plastic, self-extinguishing according to UL94-V0
- Protection Degree: IP20, EN60529
- Installation: rapid mounting on DIN-RAIL, width 4 modules
- Dimensions (HxWxL): 62mm x 71mm x 90,5mm
- Weight: approx. 0,328 kg

**ELECTRICAL SAFETY**

- Bus: 13,8VDC safety extra low voltage.
- Complies according to EN50491-5-1, EN50491-5-2 and EN60529
- Dielectric strength: module has been tested (and approved) 3kVac. (50 Hz, 1 min)
- Non-toxic WEEE/RoHS compliant

**CE**

Complies with the EMC regulations and low voltage regulations. Emission and Immunity EN50491-5-1 en EN50491-5-2. Low voltage EN60950-1



*Side view*

## 6. Guarantee provisions

Standard Warranty Period: 4 years from date of delivery.

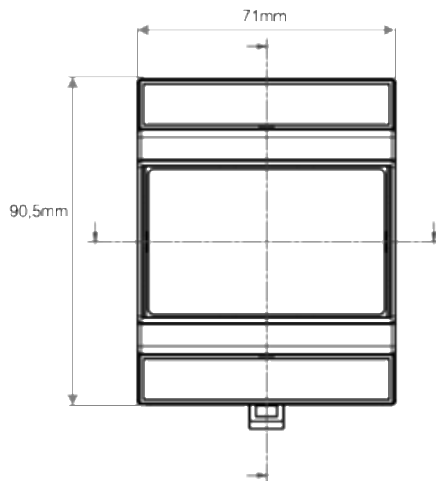
Guarantee will not be accepted if the device has been opened!

Any faulty devices should be send postage-free with a description of the defect to our central customer service office :

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## 5. Dimension Diagram



*Top view*